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REMARKS

The Applicant and the undersigned thank Examiner Mohandesi for the careful review of this application. After entry of this Response, Claims 1-30 and 51-60 are pending in the present application, with Claims 1 and 16 being independent. Consideration of the present application is respectfully requested in view of the following remarks.

Amendment to the Claims

Applicant has cancelled Claims 31-50 herein without prejudice to or disclaimer of the subject matter recited therein.

Claim Rejections Under 35 U.S.C. § 112, first paragraph

In the Office Action dated June 17, 2005, the Examiner rejected Claim 1 under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. Applicant respectfully traverses that rejection.

The Examiner states that Claim 1 contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to make and/or use the invention, such as a DC generator without commutator or a converting circuit. However, Applicant submits that the specification includes a working example of a generator that provides direct, simultaneous AC and DC voltage outputs without requiring an inverter or a converter circuit. Specifically, page 11, lines 7 to 13 of the specification states, "The air-cooled brushless generator 60 selected for the APU of the present invention is chosen because of its high efficiency and the capability of providing both high voltage AC and low voltage DC outputs simultaneously and directly without requiring any converter or inverter or voltage regulator circuits, either internally or externally to the generator. This design has the advantages of simplicity, reliability, efficiency, light weight and low maintenance. The air-cooled brushless generator shown in the illustrative embodiment is a 5.0 Kilowatt (KW) unit supplied by BMZ Generators, Inc., 412 N. Federal Highway, Pompano Beach, FL 33062."

Therefore, the Applicant respectfully submits that one of ordinary skill in the art would be able to read the specification section cited above along with the rest of the specification and

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determine the type of generator that provides direct, simultaneous AC and DC voltage outputs without requiring an inverter or a converter circuit, without undue experimentation. Accordingly, Applicant submits that the rejection under 35 U.S.C. § 112, first paragraph, should be withdrawn.

Claim Rejections Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected Claims 1-30 and 51-60 under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,899,174 to Anderson et al. (hereinafter Anderson) in view of U.S. Patent No. 4,831,277 to Christopher (hereinafter Christopher).

The Applicant respectfully offers remarks to traverse these rejections. The Applicant will address each independent claim separately as the Applicant believes that each independent claim is separately patentable over the prior art of record.

Independent Claim 1

The rejection of Claim 1 is respectfully traversed. Applicant submits that none of the documents cited by the Examiner describe, teach, or suggest at least the features of an auxiliary power unit (APU) for a transport vehicle powered by an internal combustion engine, comprising (1) an enclosure for housing and supporting the auxiliary power unit on the transport vehicle and (2) an air-cooled engine that utilizes fuel supply, exhaust and electrical systems of the transport vehicle engine, as presently recited in independent Claim 1.

The Anderson reference

The Anderson reference describes an engine generator set that can be used in applications where a ready source of electrical power is either inconvenient or unavailable. The engine generator set 10 includes an internal combustion engine 1 and an alternator 3 enclosed within a main compartment 5 of a housing 7. A primary intake compartment 31 inside housing 7 is located adjacent to main compartment 5. A second, electronic compartment 39 is also adjacent to main compartment 5 and disposed above primary air intake compartment 31 inside housing 7. A

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skid base 21 forms the bottom of housing 7. See Figure 1 of the Anderson reference reproduced below.

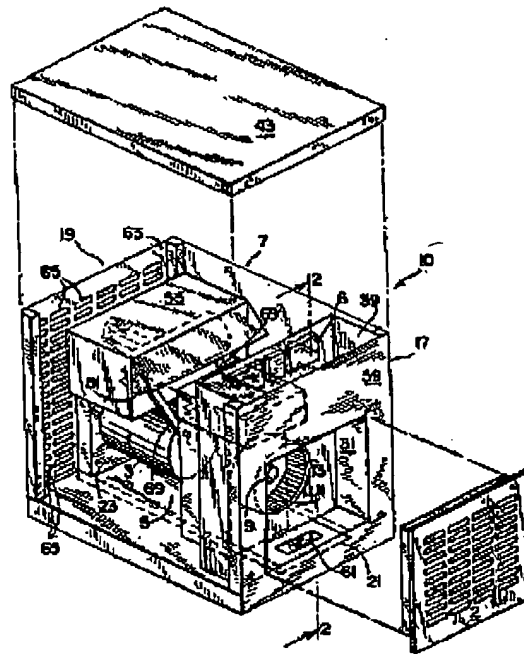


FIG. 1

Therefore, the Anderson reference fails to teach an enclosure for supporting the auxiliary power unit on the transport vehicle, as recited in independent Claim 1. In reference to Figure 5A of the present invention, the specification states that in an exemplary embodiment of the present invention "[t]he APU 10 is supported by angle brackets 198, 200 bolted to the enclosure 12 of the APU 10 and the frame rails 194, 196 respectively." See page 18, lines 6-8. Further, "[i]n another embodiment, the APU of the present invention may be supported on the transport vehicle using a clamping assembly. A clamping mounting assembly enables the mounting and installation of the APU on the transport vehicle without requiring drilling or welding operations. In one example of the clamping assembly, L-shaped angle brackets 198, 200, approximately 22 inches long and bolted to the enclosure 12 of the APU 10 along the vertical side of the angle brackets 98, 200, extend approximately two inches fore and aft beyond the front and rear walls,

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on each side of the enclosure 12. The horizontal sides of the L-shaped angle brackets 198, 200 which extend laterally away from the sides of the enclosure 12, rest on the top of the frame rails 194, 196. Inverted U-bolts, and spacer bars (not shown) drilled to fit over the threaded ends of the U-bolts, may be used to clamp the ends of the L-shaped angle brackets 198, 200 to the frame rails 194, 196 respectively. To absorb vibration, neoprene pads 195, 197 may be installed between the L-shaped angle brackets 198, 200 and the upper side of the frame rails 194, 196 and also between the spacer bars (not shown) and the lower side of the frame rails 194, 196. The APU 10 may thus be supported between the frame rails 194, 196 as shown in Figure 5A." See page 18, lines 13-27.

Furthermore, the Anderson reference describes fuel supply controls, 33 and 35, for internal combustion engine 1 are located in primary air intake compartment 31. The fuel control regulator 33 and electric shut off valve 35 are mounted to a wall of the primary air intake compartment 31. Removal of a few grill fasteners thus allows easy access to battery 37 and fuel supply controls, 33 and 35, for inspection and service. By locating the battery 37 and fuel supply controls, 33 and 35, in the primary air intake compartment 31, these potentially flammable or explosive components are maintained at close to ambient temperature. See Figure 4 of the Anderson reference reproduced below.

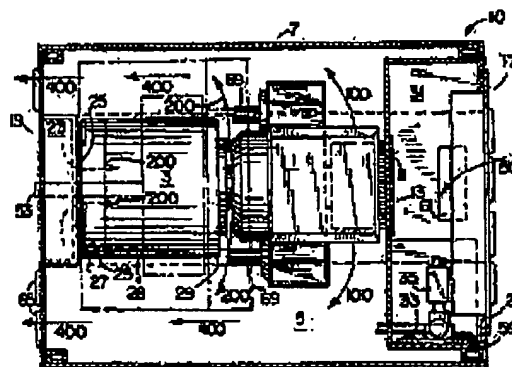


FIG. 4

Therefore, the Anderson reference fails to teach an air-cooled engine that utilizes fuel supply, exhaust and electrical systems of the transport vehicle engine, as recited in independent Claim 1. In reference to Figure 2 of the present invention, the specification states that in an exemplary embodiment of the present invention various connections of lines, tubes and wires

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that communicate with the APU 10 of the present disclosure are shown mounted on the rear wall 21 of the enclosure 12. Beginning at the lower left corner of the rear wall of the enclosure 12 in the figure, a positive terminal 104 and a negative terminal 106 for coupling the DC voltage output via respective positive lead 108 and negative lead 110 from the APU to the electrical system of the transport vehicle, generally at the battery, are shown. *See, e.g.,* Fig. 4. Next to the negative terminal 106 is an AC terminal 112 coupled to AC leads 114. The AC leads 114, which supply power to the cabin of the transport vehicle, are routed to a control box in the cabin of the transport vehicle as will be described hereinbelow during the description of Fig. 4. At the lower right corner of the APU shown in Fig. 2 is a control terminal 124 for coupling a control cable 126 between the APU 10 and the cabin of the transport vehicle. To the left of the control terminal 124 are a pair of fuel line fittings. Inlet fuel fitting 116 receives fuel from the fuel tank of the transport vehicle via a fuel line 120 connected to a standpipe unit installed in the fuel tank. Outlet or return fuel fitting 118 returns bypassed fuel to the fuel tank of the transport vehicle via a fuel line 122 and a standpipe 123. **See page 14, line 28 to page 15, line 12.**

The Christopher reference

In the Office Action, the Examiner stated that the Anderson reference does not disclose a generator having an AC and DC voltage output. For that feature, the Examiner relied on the Christopher reference.

The Christopher reference describes a power system specifically adapted to provide DC power for powering a DC load at a remote site under severe environmental conditions, such as is found at remote gas pipeline locations. The power system includes a slow speed heat engine adapted to be powered by fuel, preferably taken directly from the gas pipeline, the supply of which is controlled by means of a pressure regulator. The engine is adapted to be directly coupled to an oversized, slow speed three-phase alternator so as to produce AC power, which is subsequently rectified to DC power output for powering a load in the range of 500 to 5,000 watts. **See Abstract of the Christopher reference.**

The Christopher reference does not teach a generator that provides direct, simultaneous AC and DC voltage outputs without requiring an inverter or a converter circuit. Specifically, the

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Christopher reference teaches a system where an engine produces AC power, and subsequently rectifies all of the AC power to a DC output. See Col. 2, lines 35-40; Col. 5, lines 33-45; and Col. 7, lines 36-50 of the Christopher reference.

Summary of the Analysis for Independent Claim 1

In light of the differences between independent Claim 1 and the Anderson and Christopher references, Applicant submits that the Anderson and Christopher references, either alone or in combination, fails to teach or suggest at least the recitations as set forth in independent Claim 1. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Independent Claim 16

The rejection of Claim 16 is respectfully traversed. Applicant submits that none of the documents cited by the Examiner describe, teach, or suggest at least the features of a high efficiency auxiliary power unit, for a transport vehicle powered by an internal combustion engine and having a fuel system, an engine exhaust system and a battery powered electrical system, comprising: (1) an air-cooled engine configured for operation using the fuel supply and the engine exhaust system of the transport vehicle and (2) an air-cooled, brushless generator...providing simultaneous high voltage AC and low voltage DC outputs without using an inverter or a converter, as recited in independent Claim 16.

Similar to the analysis of independent Claim 1, the Anderson reference fails to teach an air-cooled engine configured for operation using the fuel supply and the engine exhaust system of the transport vehicle, as recited in independent Claim 16. Furthermore, the Christopher reference fails to teach an air-cooled, brushless generator that provides simultaneous high voltage AC and low voltage DC outputs without using an inverter or a converter, as recited in independent Claim 16.

In light of the differences between independent Claim 16 and the Anderson and Christopher references, one of ordinary skill in the art recognizes that the Anderson and Christopher references fail to describe, teach, or suggest the recitations as set forth in

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independent Claim 16. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Dependent Claims 2-15, 16-30, and 51-60

The Applicant respectfully submits that the above-identified dependent claims are allowable because the independent claims from which they depend are patentable over the cited prior art reference. The Applicant also respectfully submits that the recitations of these dependent claims are of patentable significance.

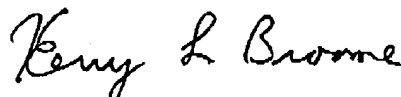
In view of the foregoing, the Applicant respectfully requests that the Examiner withdraw the pending rejections of dependent Claims 2-15, 16-30, and 51-50.

CONCLUSION

The Applicant submits the foregoing as a full and complete response to the Final Office Action dated June 17, 2005. The Applicant and the undersigned thank Examiner Mohandesi for consideration of these remarks. The Applicant submits that this Amendment places the application in condition for allowance and respectfully request such action.

If any issues exist that can be resolved with an Examiner's Amendment or a telephone conference, please contact the undersigned at 404.572.4647.

Respectfully submitted,



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